Protective Action Guides (PAGs) Update

April 2008

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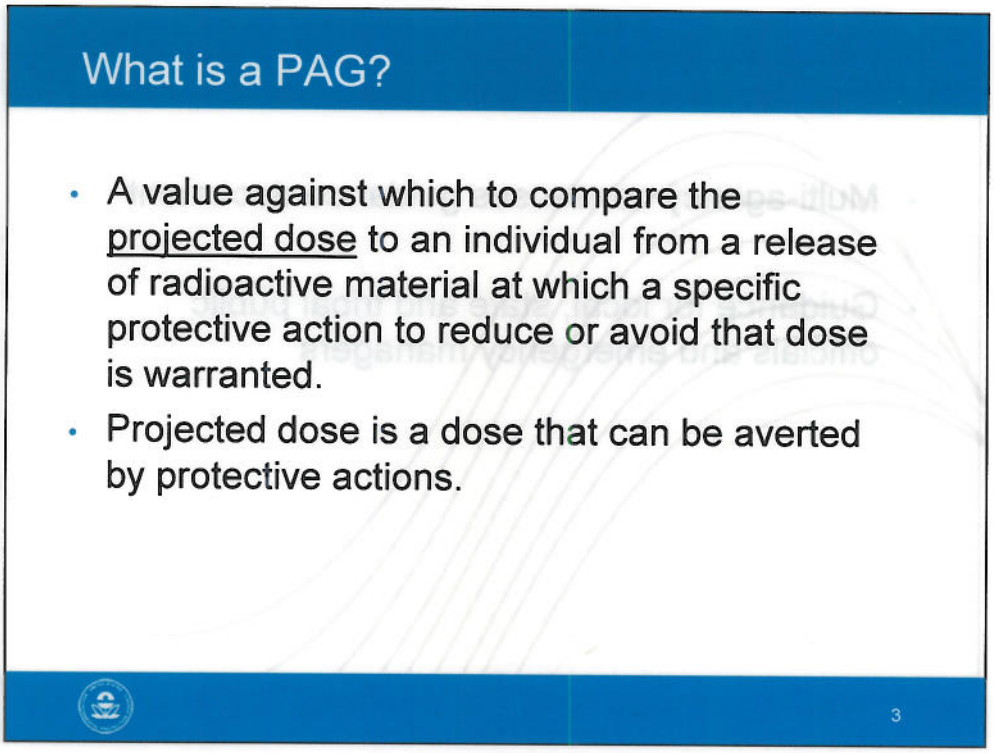
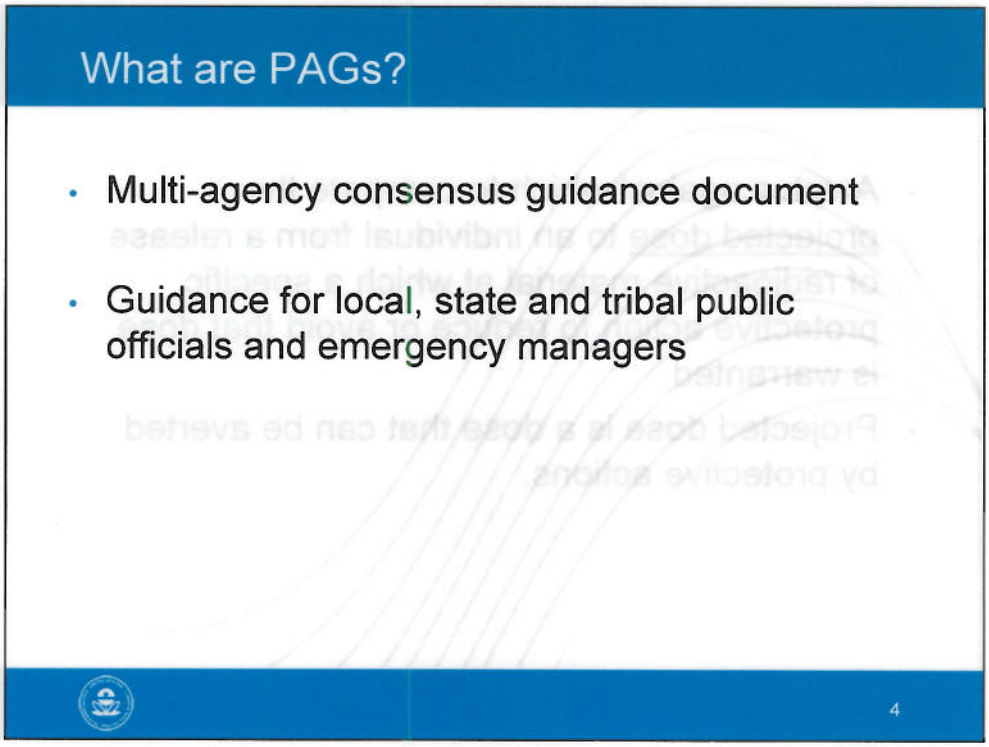
Overview

1. What are PAGs?
2. Comparing 1992 and 2008 PAGs
3. DHS RDD-IND PAG document
4. Outreach strategies



Just a reminder that the PAGs are compared to projected doses from models, and actions are taken to avoid those doses. It is not dose actually received. We split an incident into three time phases, the Early, Intermediate, and Late phases so we can apply different protective action guidance for the changing circumstances. More on that in a minute.

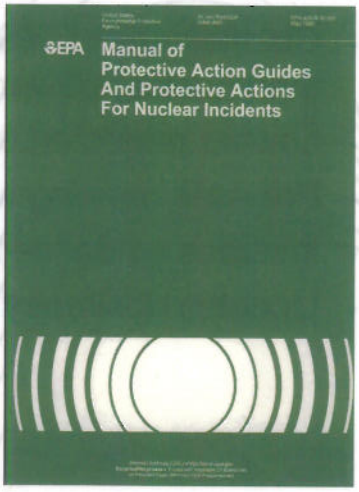


EPA inherited the task of advising the President and federal agencies on radiation matters when it was formed in 1970. Previously the Federal Radiation Council had that job. Recognizing that role, the Federal Emergency Management Agency (FEMA) directed EPA, by regulation, to "establish Protective Action Guides (PAGs) for all aspects of radiological emergency planning in coordination with appropriate Federal agencies." 44 CFR § 351.22(a) (47 FR 10758 (March 11, 1982)). FEMA also tasked EPA with preparing "guidance for State and local governments on implementing PAGs, including recommendations on protective actions which can be taken to mitigate the potential radiation dose to the population." 44 CFR § 351.22(b). All of this information was to "be presented in the Environmental Protection Agency (EPA) 'Manual of Protective Action Guides and Protective Actions for Nuclear Incidents.'" 44 CFR § 351.22(b).

The draft revision will be coming out for public review and comment in _____ if no additional reviews are suggested by upper EPA management.

The 1992 EPA PAG Manual

- Currently in use
- Nuclear power plant accident focus
- Based on 1970s health effects science
- Promised Water and Late Phase



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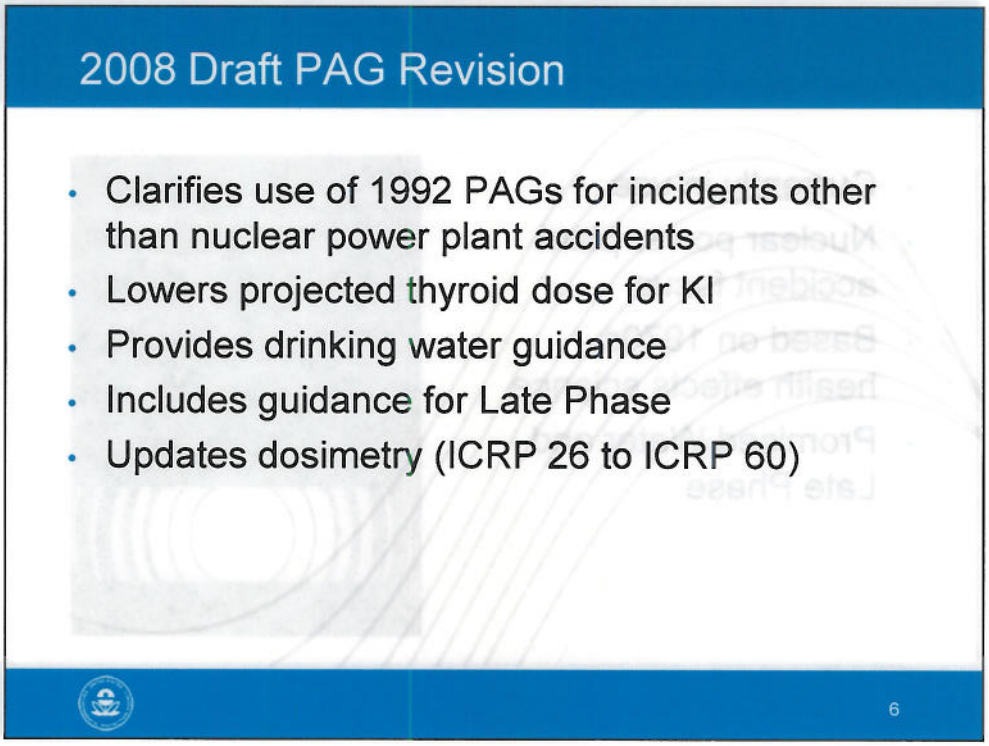
The 1992 guidance is very nuclear power plant – centric. Other incidents were considered lesser, and if the power plant was covered, so would all other incidents/events/accidents.

A symposium held in 1992 concluded that the PAGs could be applied to all other imaginable radiological incidents (short of nuclear war).

The old health effects science is in the International Council on Radiation Protection 26 series, published in the late 1970s.

The 1992 Manual is still useful and should continue to be used! It is useful to use more current electronic tools like FRMAC tools.

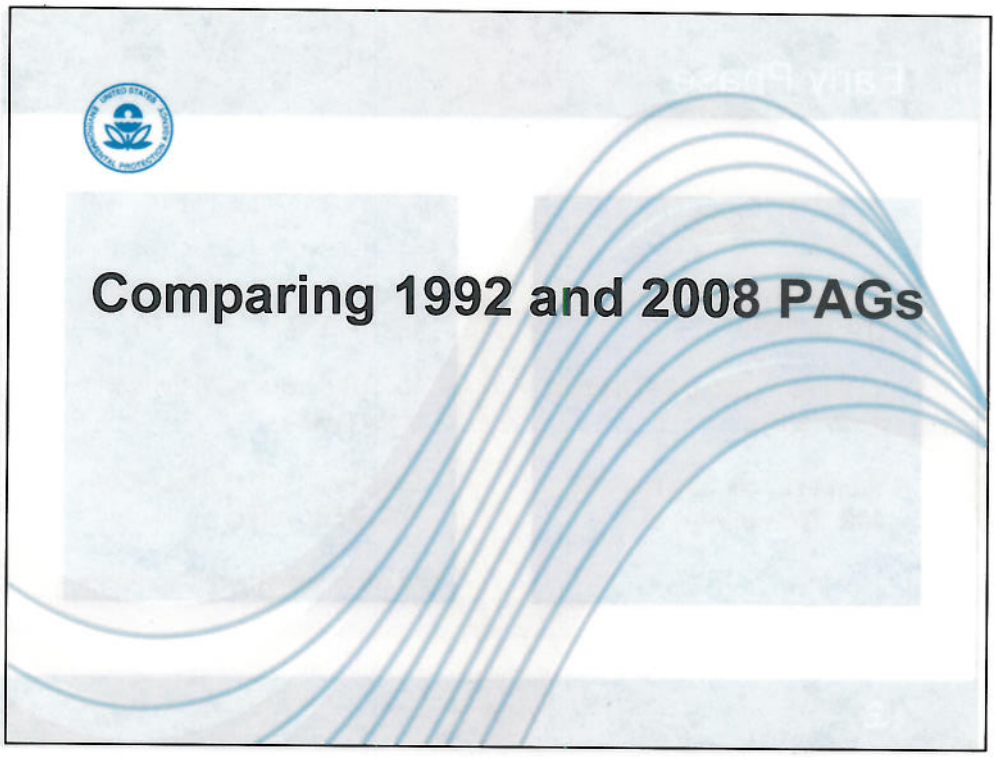


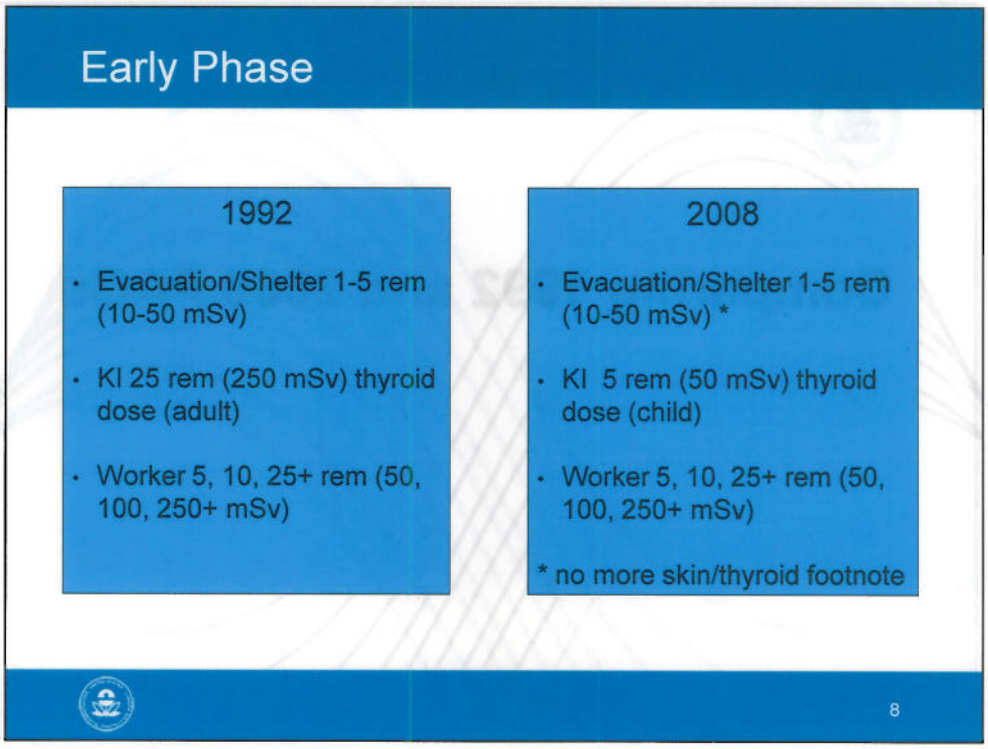
This is a brief overview of the changes that EPA has made to the draft PAG Manual. Given the current security environment, we thought it was very important to make the PAGs relevant to **all types** of nuclear incidents.

We have lowered the projected thyroid dose for the administration of stable iodine based on data from the Chernobyl accident.

The draft manual includes drinking water guidance, as well as long-term site restoration guidance.

Finally, the guide updates the dosimetry from International Commission on Radiological Protection Publication 26 (ICRP 26) used in the 1992 edition to the more recent ICRP 60 series (published in the 1990s). Tools like RASCAL and FRMAC programs are being updated accordingly.

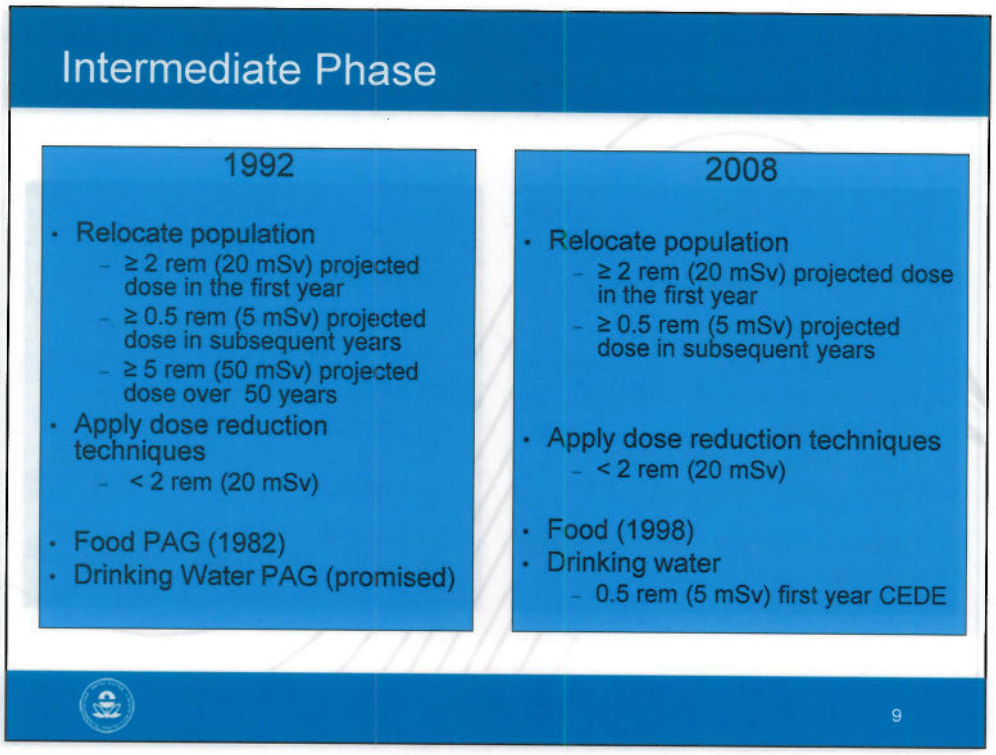

Comparing 1992 and 2008 PAGs



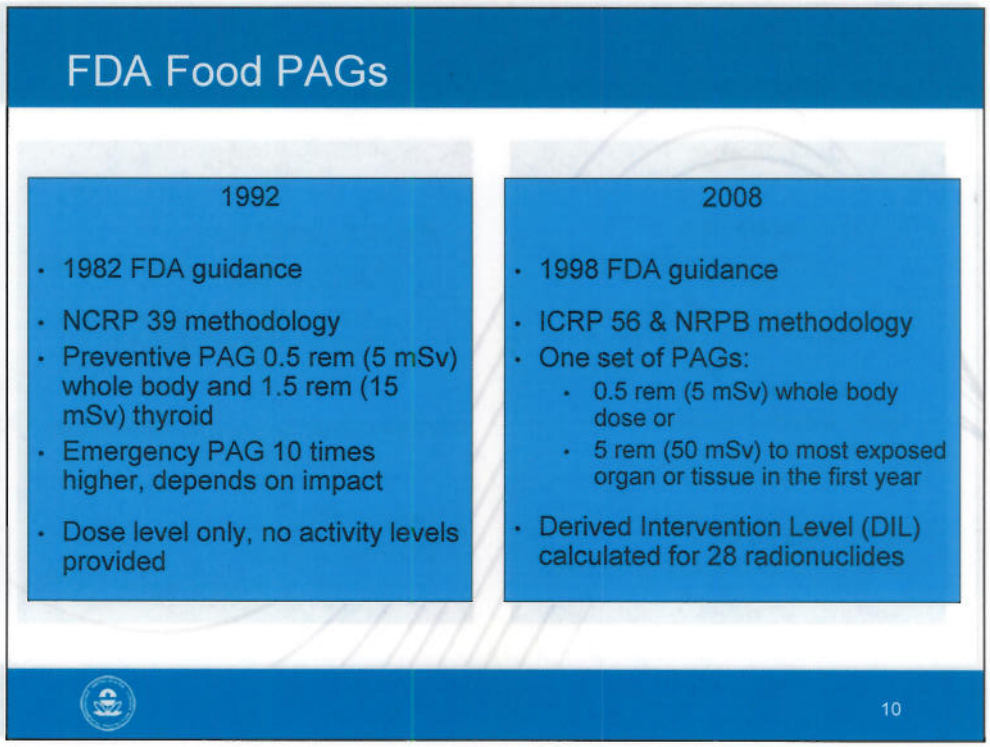
•These slides are from the 4-hour workshop presentation. Note the KI threshold is lower, a simplification of the FDA's age, threshold and dosage-specific guidance because it might be hard to implement in an emergency, giving different aged people KI at different projected radiation doses AND in different milligram amounts!

•Worker guides are the same numbers but with OSHA language from DHS RDD-IND document.

•Keep in mind these 2008 items are all just proposed, and not yet out for public review and comment. They are subject to change.



•Here the big difference is that per the DHS working group, we are getting rid of the 5 rem over 50 years relocation PAG. Also, the Food PAG is updated and we added a new drinking water PAG.



- FDA – Food and Drug Administration
- NCRP – National Council on Radiation Protection and Measurements
- ICRP – International Commission on Radiological Protection
- NRPB – National Radiological Protection Board
- Note the FDA Food PAG is 0.5 rem for the first year only (like our water pag!)

Drinking Water PAG

1992

- Promised

2008

- Applicable to drinking water from any source
- EPA Safe Drinking Water Act levels after first year
- Doses will be greatly reduced in subsequent years
- 'Bridging language' to explain FDA Food PAG (includes water) and EPA Water PAG relationship

Late Phase Guidance

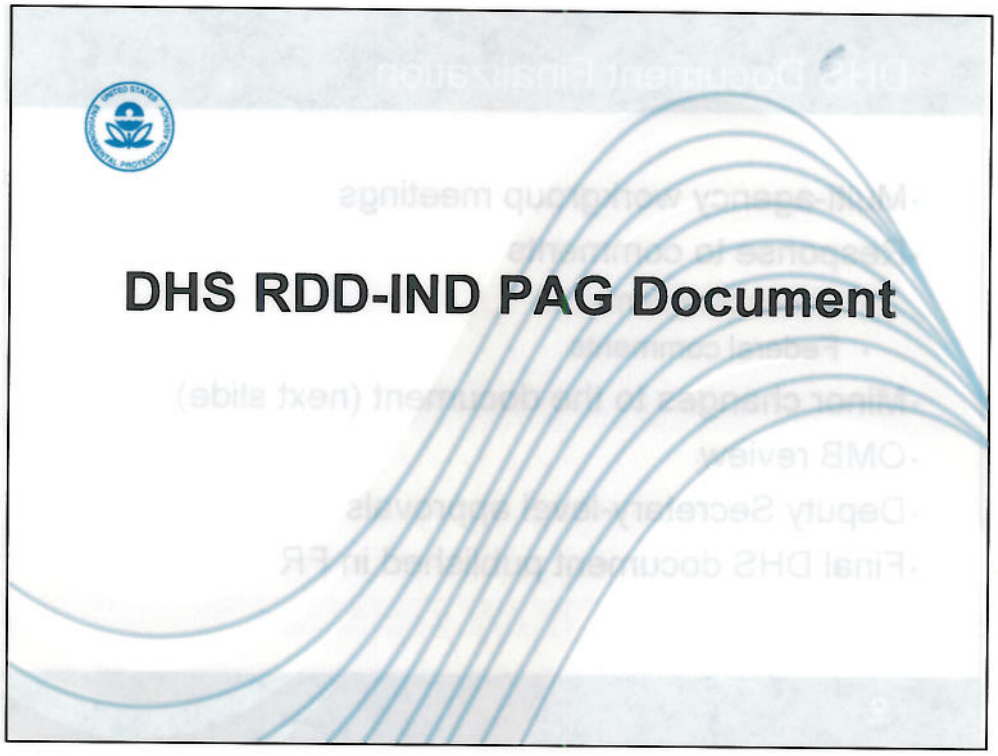
1992

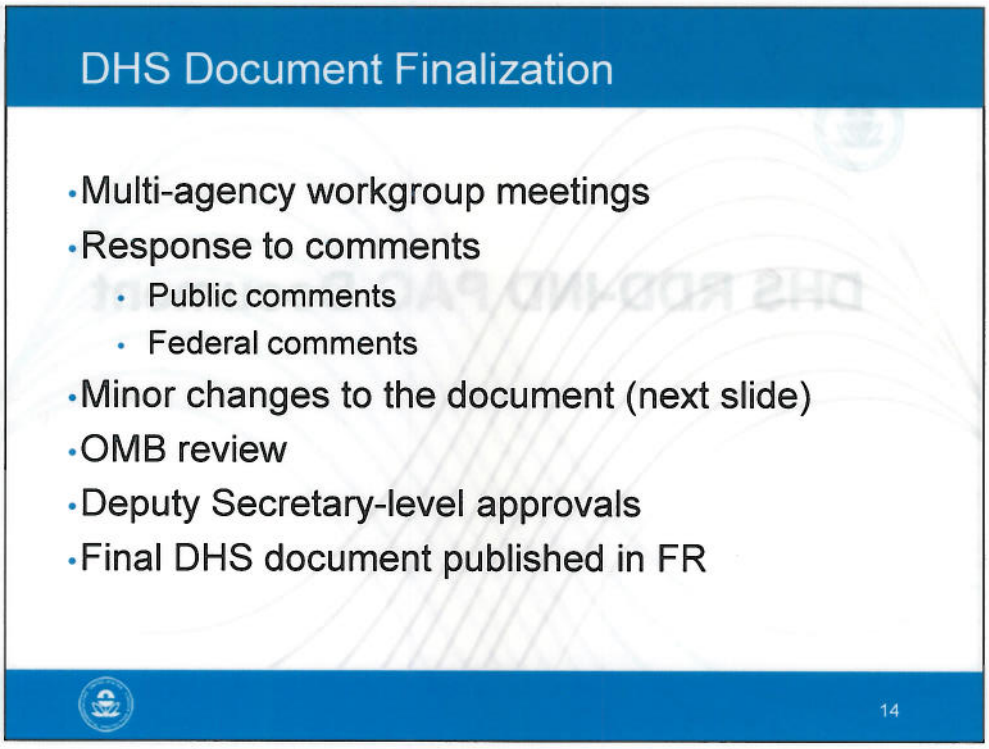
- Promised

2008

- DHS RDD/IND Consequence Management Workgroup drafted current guidance

  January 3, 2006, *Federal Register* notice
- All radiological events covered (e.g., nuclear plant, dirty bomb, improvised nuke)
- Optimization

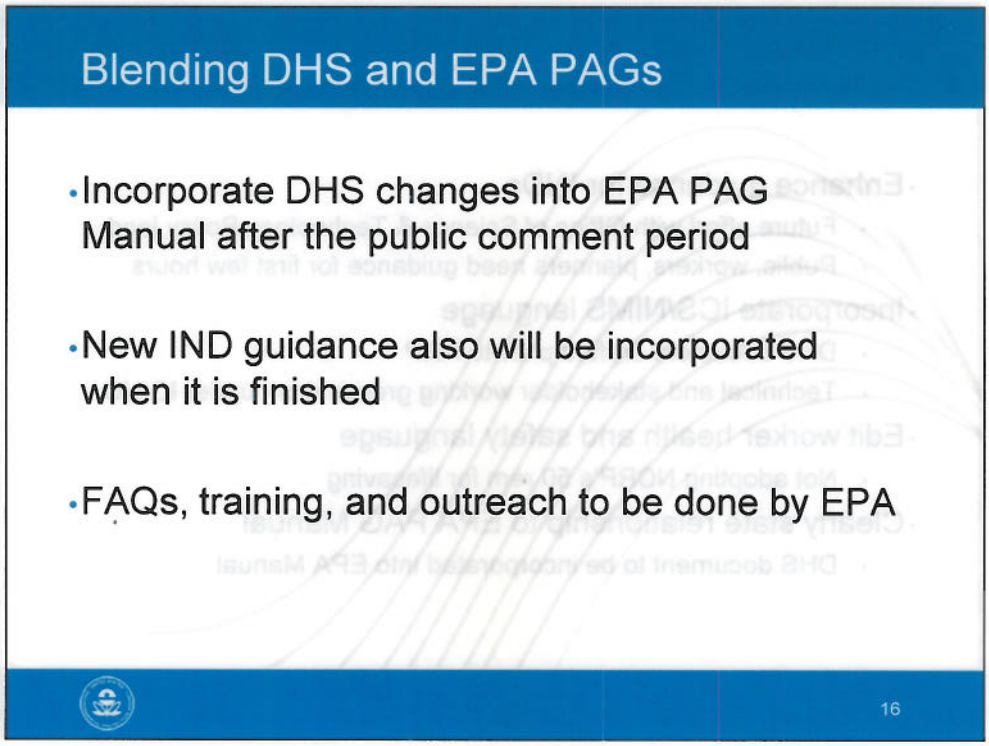

DHS RDD-IND PAG Document



•The Final DHS RDD/IND PAG document just got done with OMB review, then once it goes through some approvals it will be published in the Federal Register as final. The final version explains how the RDD/IND guidance and Optimization approach are being incorporated into the forthcoming EPA PAGs Manual revision, so the DHS guidance will essentially go away when we publish our EPA PAGs Manual.

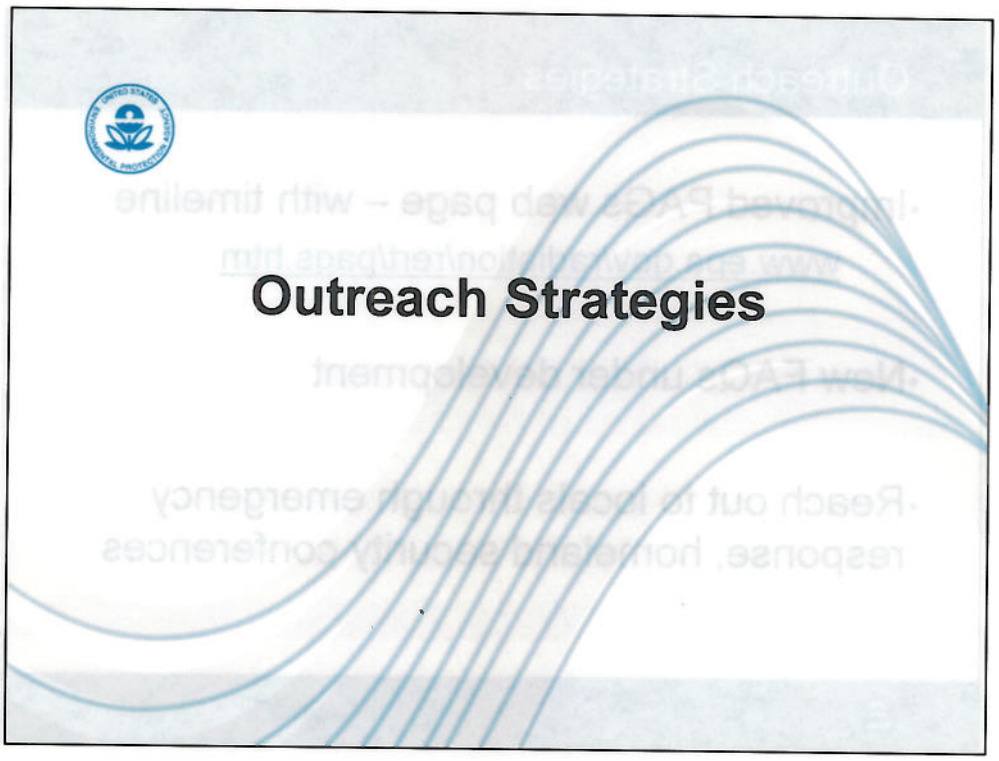
Changes to the DHS document

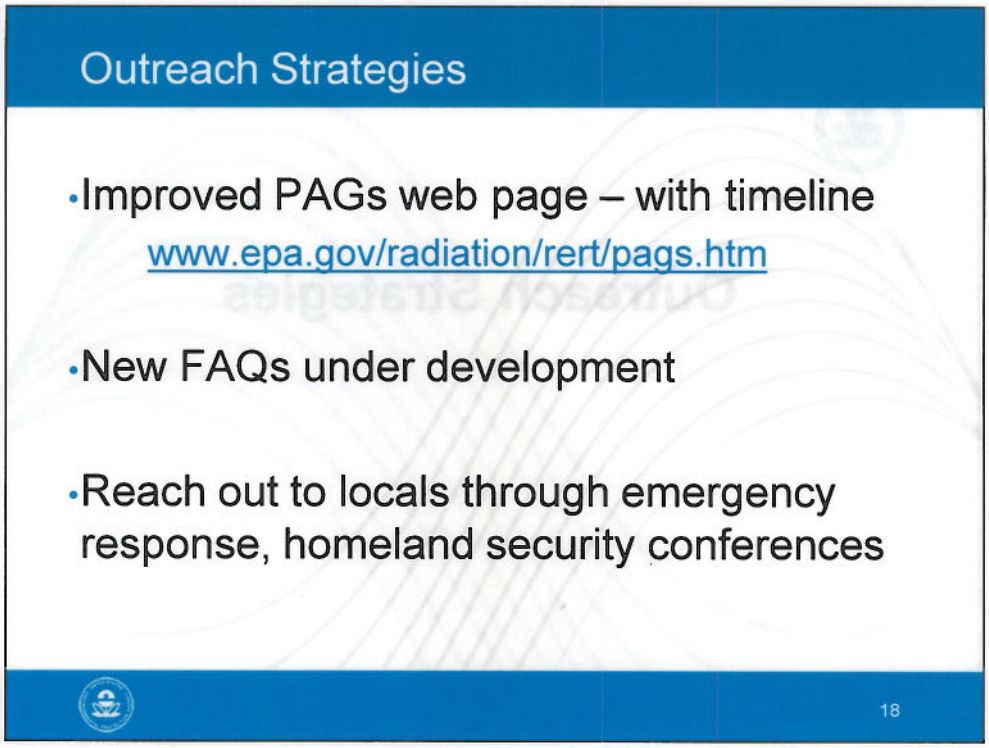
- Enhance guidance for INDs
  - Future effort with Office of Science & Technology Policy lead
  - Public, workers, planners need guidance for first few hours
- Incorporate ICS/NIMS language
  - DHS document drafted prior to NRP
  - Technical and stakeholder working groups work under IC/UC
- Edit worker health and safety language
  - Not adopting NCRP's 50 rem for lifesaving
- Clearly state relationship to EPA PAG Manual
  - DHS document to be incorporated into EPA Manual



•There is new work underway on IND guidance. DHS's Office of Health Affairs is working on public messaging for the first few post-detonation hours, also.

•We are looking at the opportunity to be the ones providing the outreach and training on PAGs – but we need all our federal partners to help us out and spread the word about continuing to use the 1992 PAGs and providing comments on the new revision when it comes out.


Outreach Strategies

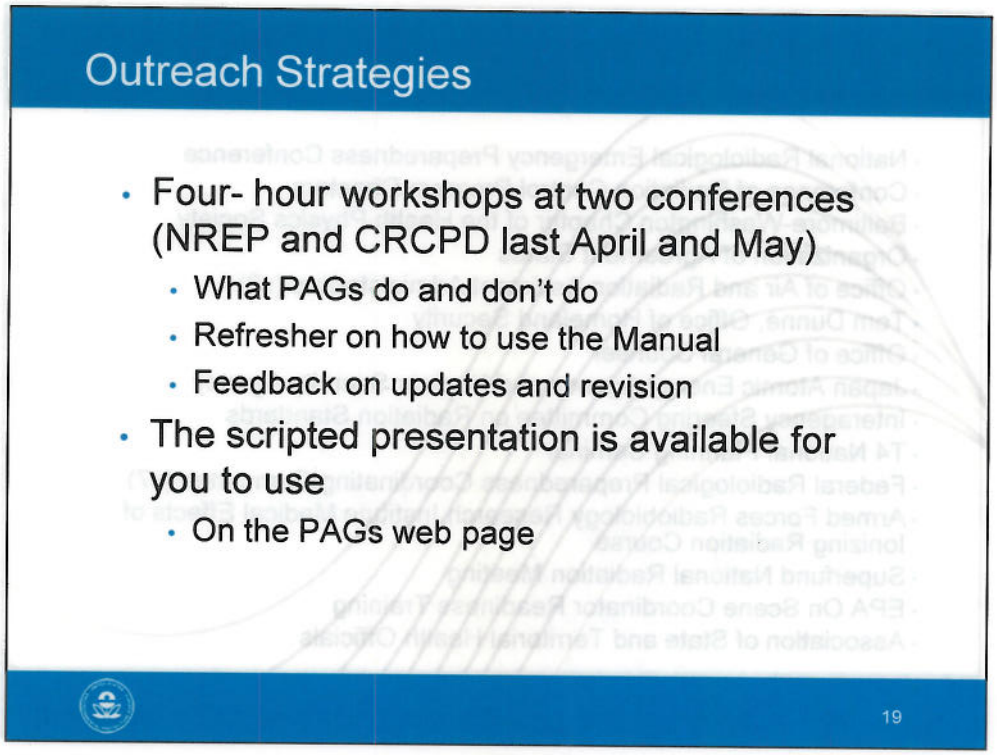


•NFPA National Fire Protection Association (NFPA 471 Response to Hazardous Materials Incidents)

•IAFC International Association of Fire Chiefs has a Haz Mat response teams conference

•IAEM International Association of Emergency Managers

•Outreach methods can include road shows with the four hour workshops, train the trainer modules, webcasts, DVDs…



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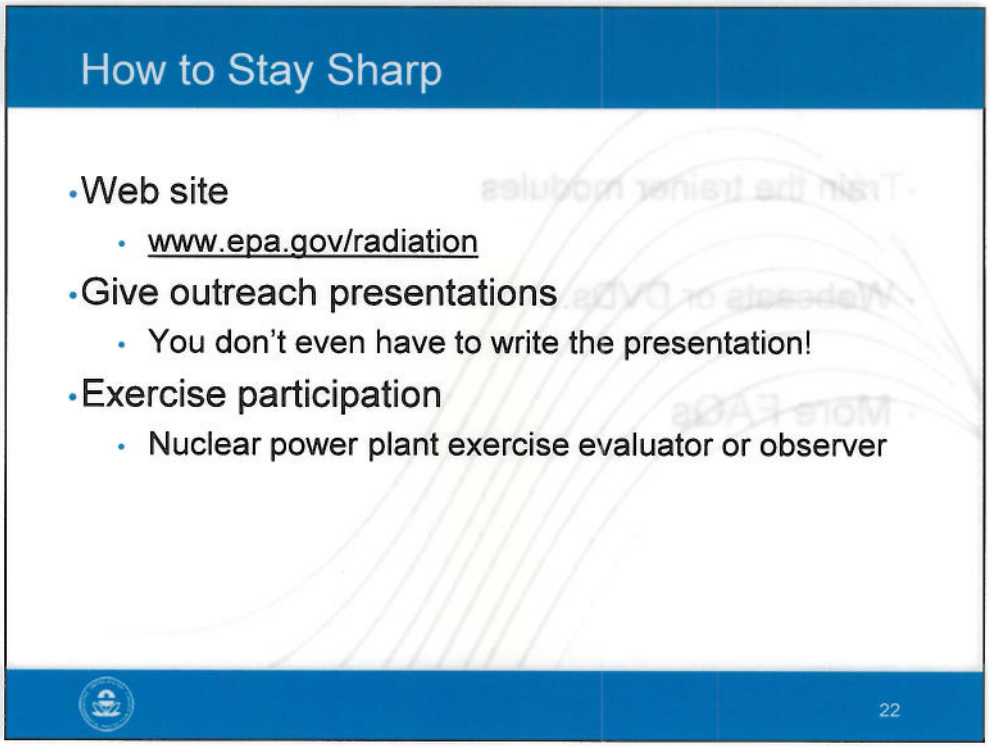
Outreach So Far…

- National Radiological Emergency Preparedness Conference
- Conference of Radiation Control Program Directors
- Baltimore-Washington Chapter of the Health Physics Society
- Organization of Agreement States
- Office of Air and Radiation Assistant Administrators (x2)
- Tom Dunne, Office of Homeland Security
- Office of General Counsel
- Japan Atomic Energy Agency and Nuclear Security Agency
- Interagency Steering Committee on Radiation Standards
- T4 National Planning Seminar
- Federal Radiological Preparedness Coordinating Committee (x7)
- Armed Forces Radiobiology Research Institute Medical Effects of Ionizing Radiation Course
- Superfund National Radiation Meeting
- EPA On Scene Coordinator Readiness Training
- Association of State and Territorial Health Officials

•This is not a complete list!

Future Outreach Ideas

- Train the trainer modules
- Webcasts or DVDs…
- More FAQs



Ways to stay in touch with the PAGs…

Questions and Comments

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